



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,654	10/02/2003	Yun-Feng Chang	2003B096	9963

23455 7590 10/26/2006

EXXONMOBIL CHEMICAL COMPANY
5200 BAYWAY DRIVE
P.O. BOX 2149
BAYTOWN, TX 77522-2149

EXAMINER

SAMPLE, DAVID R

ART UNIT PAPER NUMBER

1755

DATE MAILED: 10/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/677,654

Applicant(s)

CHANG ET AL.

Examiner

David Sample

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-80 and 82-103 is/are pending in the application.
- 4a) Of the above claim(s) 64-80, 100-103 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-63, 82-103 is/are rejected.
- 7) ☒ Claim(s) 10, 16, 21, 26, 30, 32, 36, 41, 50, 52, 56, 61, 85 and 89-92 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 20031002;20040507.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election of claims 1-63, 82-99 in the reply filed on July 14, 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 64-80, 100-103 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on July 14, 2006.

Claim Objections

Claims 10, 16, 21, 26, 30, 32, 36, 41, 50, 52, 56, 61, 85 and 89-92 are objected to because of the following informalities:

Claims 10, 16, 21, 26, 30, 32, 36, 41, 50, 52, 56, 61, 85 and 89-92 are objected to for the use of "preferable" ranges or limitations. The claims are definite because one of ordinary skill in the art recognizes that the "preferable" ranges or limitations are optional or exemplary, and not express recitations of the claims. However, such "preferable" ranges or limitations have not traditionally been used in U.S. patent claims. Therefore, the examiner requests that the "preferable" ranges/limitations be deleted from the claims, and inserted into new dependent claims.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "sharp" in claims 1 (step c), 5 and 6 is a relative term which renders the claim indefinite. The term "sharp" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention.

Claims 2-4 and 7-23 are rejected for failing to correct the deficiencies of claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 1755

Claims 1-63 and 82-103 are rejected under 35 U.S.C. 102(e) as being anticipated by Chang et al. (US 2003/0187312).

Chang et al. discloses a method of forming a catalyst by a) obtaining a solution of aluminum chlorohydrate; b) mixing the solution of aluminum chlorohydrate with a molecular sieve (SAPO-34); c) aging the mixture at a temperature of 40°C for 15 hours; and d) spray drying the aged mixture. See Paragraphs [0127], [0130], and [0135].

As to claims 2, 25, 46 and 83, the liquid medium is water as shown in paragraph [0127].

The ARI recited in claim 44, 45, 82 and 84 can be found in the portion of paragraph [0135] on page 16.

As to claims 8, 9, 28, 29, 48, 49, 87 and 88, the reference employs aluminum chlorohydrate as an inorganic oxide precursor. See paragraph [0127].

The aging time and temperature recitations of instant claims 10-13, 30-33, 50-53 and 85 can be found in paragraph [0127] of Chang et al. where it discloses aging at 40°C for 15 hours.

Chang et al. employs SAPO-34 which anticipates the recitations of instant claims 17-19, 37-39, 57-59 and 94-96. See paragraph [0126].

The recitations of instant claims 14, 15, 34, 35, 54, 55, 89-91 appear to be present in the reference in paragraph [0127] where Chang et al. discloses mixing the aluminum chlorohydrate solution for 0.2 to 12 hours.

As to claims 16, 36, 56 and 92, the reference further adds kaolin clay to the slurry as disclosed in paragraph [0127].

As to claims 20, 40, 60, and 97, Chang et al. employs uncalcined SAPO-34 as described in paragraph [0126].

Art Unit: 1755

As to claims 22, 23, 42, 43, 62, 63, 98 and 99, Chang et al. discloses spray drying and calcining the slurry in paragraph [0135].

Chang et al. fails to disclose the following properties: (1) that the resultant aged slurry has the ²⁷Al NMR peak of claim 1; (2) the size or amounts of aluminum oligomers recited in claims 3-6; (3) the slurry viscosity recited in claims 21, 41, 61, and 93; or (4) the Relative Binding Efficiency recited in claims 24 or 26. However, the process of Chang et al. performs a process that is identical to the presently claimed process, and an identical process cannot result in a different product. Therefore, properties (1)-(4) are assumed to be inherent to the process of Chang et al. See MPEP 2112.

The applied reference has a common assignee and inventors with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Claims 1-14, 16, 21-34, 36, 41-54, 56 and 61-63 are rejected under 35 U.S.C. 102(b) as being anticipated by Herbst et al. (US 4,837,396).

Herbst et al. discloses a method of making a catalyst by a) obtaining a solution of aluminum chlorohydrate or aluminum zirconium chlorohydrate; b) mixing the solution of aluminum/zirconium chlorohydrate with a zeolite; c) holding the mixture at a temperature such

Art Unit: 1755

as room temperature, 71°C, 82°C, 126°C for times such as 1, 2 and 20 hours; and d) spray drying the mixture. See col. 4, lines 10-13, col. 7, line 17 to col. 8, line 18, and col. 8, lines 68.

As to claims 2, 25, 46, the liquid medium is water as shown at col. 7, lines 18.

As to claims 7-9, 27-29, 47-49, the reference employs aluminum chlorohydrate or aluminum zirconium chlorohydrate as an inorganic oxide precursor. See the abstract.

The aging time and temperature recitations of instant claims 10-13, 30-33, 50-53 can be found in col. 7, line 17 to col. 8, line 18 of Herbst et al. where it discloses holding the mixture at a temperatures such as room temperature, 71°C, 82°C, 126°C for times such as 1, 2 and 20 hours aging at 40°C for 15 hours.

As to claims 16, 36 and 56, the reference further adds kaolin clay to the slurry as disclosed in col. 4, lines 10-15.

As to claims 22, 23, 42, 43, 62 and 63, Herbst et al. discloses spray drying and calcining the slurry at col. 4, lines 10-13, 34-36 and col. 8, lines 68.

Herbst et al. fail to disclose the following properties: (1) that the resultant aged slurry has the ²⁷Al NMR peak of claim 1; (2) the size or amounts of aluminum oligomers recited in claims 3-6; (3) the slurry viscosity recited in claims 21, 41, and 61; (4) the Relative Binding Efficiency recited in claims 24 or 26; or (5) the ARI properties recited in claims 44 and 45. However, the process of Herbst et al. is identical to the presently claimed process, and an identical process cannot result in a different product. Therefore, properties (1)-(5) noted above are assumed to be inherent to the process of Herbst et al. See MPEP 2112.

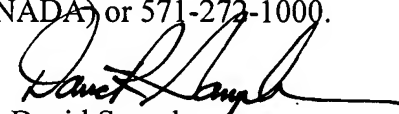
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Sample whose telephone number is (571)272-1376. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (572)272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



David Sample
Primary Examiner
Art Unit 1755